REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion is respectfully requested.

Claims 1-3, 5 and 9 are pending in this application. Claims 1, 3 and 9 are amended; and Claims 4 and 6-8 are canceled by the present amendment. Support for amended Claims 1, 3 and 9 can be found in the original specification, claims and drawings.[1] No new matter is presented.

In the outstanding Official Action, the specification was objected to because of the length of the abstract; Claims 1, 3, 6, and 8 were rejected under 35 U.S.C. as being anticipated by Hall (U.S. Patent No. 5,991,618); and Claims 2, 4, 5, 7 and 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of Denkert et al. (U.S. Patent No. 6,374,117, herein "Denkert").

In response to the objection to the specification, the Abstract of the specification has been rewritten so as to be under 150 words in length. Accordingly, Applicants respectfully request that the objection to the specification be withdrawn.

The outstanding Official Action rejected Claims 2, 4, 5, 7 and 9 under 35 U.S.C. 103(a) as being unpatentable over Hall in view of Denkert. The Official Action cites Hall as disclosing the applications invention with the exception of the data retransmission steps recited in independent Claims 2, 5, and 9. The Official Action cites Denkert as disclosing this claimed feature and states that it would have been obvious at the time the invention was made to combine the cited references to arrive at Applicant's claims. Applicants respectfully traverse this rejection as Denkert fails to teach or suggest the claimed features for which it is asserted as a secondary reference under 35 U.S.C. 103.

[1] e.g., specification, pp. 18-20 and Fig. 3 supporting amended Claims 1 and 3.

Independent Claim 2 relates to a transmission power control method in a radio communication system comprising a base station and mobile stations in which data retransmission occurs when transmitting data between the base station and mobile stations. As discussed at pp. 24-28 and Figs. 8-14, the base station alters the power transmission margin based on the number of retransmission attempts (counts) between the two devices. In this manner, the system is able to conserve resources by increasing the power margin only when the retransmission count increases.

Specifically, independent Claim 2 recites, *inter alia*, a transmission power control method,

> wherein a transmission power margin... ***is set so that the transmission power margin increases as the data retransmission count in an uplink or in a downlink increases***.

Independent Claims 5, and 9, while directed to alternative embodiments, recited substantially similar features. Accordingly, the arguments presented below are applicable to each of independent Claims 2, 5 and 9.

As noted above, the outstanding Official Action admits that Hall fails to teach or suggest the above-emphasized step of setting the transmission power based on a retransmission count in the uplink or downlink. In an attempt to remedy this deficiency, the Official Action relies on Denkert.

Denkert describes a method and system for controlling a transmit power level based upon queue delay for packets in a wireless packet data system. Specifically, Denkert describes that downlink transmit power is adapted based on a queue time of a data packet.[2]

[2] Denkert, Abstract.

Denkert, however, fails to teach or suggest setting a transmission power margin so that ***the transmission power margin increases as the data retransmission count*** in an uplink or in a downlink increases, as recited in independent Claim 2.

In addressing this claimed feature, the Official Action relies on col. 3, lines 14-27 of Denkert. This cited portion of the reference describes that as the queue time of a particular data packet stored in a buffer approaches a threshold time, the transmit power for that packet can be increased to reduce the remaining delay associated with receiving that packet at the other end of the connection. This system results in a prioritization of the transmission of the data packet and a delay associated with possible retransmission.

Denkert, however, fails to teach or suggest maintaining a retransmission count for the data to be transmitted, much less adjusting the transmission power level based on the retransmission count. Instead, Denkert's system simply determines that a packet of data has been queued for a long period of time and increases the transmission power associated with the data in response. At no point does Denkert teach or suggest utilizing a retransmission count to adjust power whatsoever.

Therefore, neither Hall nor Denkert, neither alone, nor in combination, teach or suggest setting a transmission power margin so that ***the transmission power margin increases as the data retransmission count*** in an uplink or in a downlink increases, as recited in independent Claim 2.

Accordingly, Applicants respectfully request that the rejection of independent Claims 2, 5 and 9 under 35 U.S.C. 103 be withdrawn.

In response to the rejection of Claims 1 and 3 as anticipated by Hall, Applicants respectfully submit that amended independent Claims 1 and 3 state novel features clearly not taught or rendered obvious by the applied references.

Amended independent Claim 1 relates to a transmission power control method in a radio communication system comprising a base station and mobile stations. As depicted in Figs. 6B-6C, for example, the method improves on previous power control methods by decreasing the power margin allocated to non-real-time communications, as compared to real-time communications. The method helps to more efficiently use system resources, while also decreasing the overall interference generated by the transmission of non-real-time communications.

Specifically, independent Claim 1, recites, *inter alia*, a transmission power control method, comprising:

> determining that a communication to be transmitted from the base station to the mobile station is either real-time traffic or non-real time traffic...
> setting a transmission power margin to a first value if the communication is real-time traffic and a second value is the communication is non-real time traffic, ***wherein the first value is greater than the second value***...

Independent Claim 3, while directed to an alternative embodiment, is amended to recite substantially similar features. Accordingly, the remarks presented below are applicable to each of independent Claims 1 and 3.

As discussed above, the claimed method increases the power margin for real-time communications relative to non-real-time communications to increase system efficiency and decrease system interference. As disclosed at pp. 22-23 of the specification, such an adjustment is advantageous since non-real-time communications may be subject to retransmission if an error in communications is detected.

Turning to the applied reference, Hall describes a method and system for estimating a communication mode quality in a wireless communication system. Hall describes that a power margin is determined by subtracting a subscriber transmit power from a maximum

transmit power. Then, in response to the current communications mode of the subscriber unit, a predetermined power margin requirement for the current communications mode is estimated.[3]

Hall, however, fails to teach or suggest setting a transmission power margin to a first value if the communication is real-time traffic and a second value is the communication is non-real time traffic, ***wherein the first value is greater than the second value***, as recited in independent Claims 1 and 3.

Instead, as described at col. 3, lines 20-33, Hall's method describes that the power margin for the transmission of voice signals (5 dB) may be lower than the power margin used to transmit non-real-time data signals (8 dB). While Hall also states that other parameters are taken into consideration, the reference fails to teach or suggest detecting the mode of communications, the assigning non-real-time traffic a lower power margin, as recited in independent Claims 1 and 3.

Therefore, Hall fails to teach or suggest setting a transmission power margin to a first value if the communication is real-time traffic and a second value is the communication is non-real time traffic, ***wherein the first value is greater than the second value***, as recited in independent Claims 1 and 3.

Accordingly, Applicants respectfully request that the rejection of independent Claims 1 and 3 under 35 U.S.C. 102 be withdrawn.

[3] Hall, Abstract.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1-3, 5 and 9, is definite and patentably distinguishing over the applied references. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of the application is therefore requested

Respectfully submitted,

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